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ATTORNEYS FOR DEFENDANTS
AT&T CORP., AND
SBC INTERNET SERVICES, INC.

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

BRANDYWINE COMMUNICATIONS
TECHNOLOGIES, LLC,

Plaintiff,

v.

AT&T CORP, et al.,

Defendant.

Case Number: C 12-02494 CW

**STIPULATION AND REQUEST
TO EXTEND DEADLINES TO
SUBMIT CLAIM
CONSTRUCTION BRIEFING
AND COMPLETE MEDIATION**

1 The Parties to the above-entitled action, by and through their undersigned counsel, jointly
2 submit this Stipulation and Request to Extend Time pursuant to Civil Local Rule 6-2. As grounds
3 for the Request, the Parties state the following:

4 1. Pursuant to the Court's Case Management and Scheduling Order (D.I. 25) in this
5 patent infringement case, Plaintiff Brandywine Communications Technologies, LLC ("Plaintiff")
6 is scheduled to file its opening claim construction brief on April 18, 2013; Defendants AT&T
7 Corp. and SBC Internet Services, Inc. ("Defendants") are scheduled to file their responsive claim
8 construction brief on May 16, 2013; and Plaintiff is scheduled to file its reply brief on May 23,
9 2013.

10 2. Yesterday, in a case pending in the Middle District of Florida, *Brandywine*
11 *Communications Technologies, LLC v. CenturyTel Broadband Services, LLC et al.*, Case No.
12 6:12-cv-286-Orl-36DAB, involving the same patents asserted here, the court issued a claim
13 construction order. A copy of the order is attached hereto as Exhibit A.

14 3. In light of the recent order, the Parties believe that it would be efficient to defer
15 each of the claim construction briefs for one week, so that each Party may review the order and
16 address it among themselves and within the briefing.

17 4. The Parties request an extension of one (1) week for the each claim construction
18 brief. The opening brief will be filed April 25, 2013, the responsive brief will be filed May 23,
19 2013, and the reply brief will be filed May 30, 2013.

20 5. Pursuant to the Amended Minute Order and Case Management Order (D.I. 58), the
21 Parties have been directed to complete private mediation no later than May 4, 2013.

22 6. The Parties are in the process of negotiating and exchanging information that may
23 narrow the scope of issues involved in this case. The Parties agree that resolution of these issues
24 would be beneficial to the mediation process and request that the deadline to complete mediation
25 be extended three (3) months, until August 5, 2013.

26 7. The requested extensions for claim construction briefing and mediation would not
27 affect any other deadlines in the current case schedule and shall in no way interfere with the
28

1 progress of discovery.

2 WHEREFORE, the Parties hereby stipulate and agree to extend the deadline for Plaintiff to
 3 file its opening claim construction brief to April 25, 2013, the deadline for Defendants to file their
 4 responsive claim construction brief to May 23, 2013, and the deadline for Plaintiff to file its reply
 5 brief to May 30, 2013, and that the deadline to complete mediation be extended to August 5, 2013;
 6 and respectfully request the Court to modify its Case Management and Scheduling Order.

7
 8 **IT IS SO STIPULATED.**

9 Dated: April 18, 2013

FARNEY DANIELS LLP

10 By: /s/ Brian H. VanderZanden

11 Timothy Devlin (*pro hac vice*)

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13 Attorneys for Plaintiff

14 Brandywine Communications Technologies, LLC

15
 16 Dated: April 18, 2013

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20 Robert J. Artuz (Cal. Bar No. 227789)

21 Attorneys for Defendants

22 AT&T Corp. and SBC Internet Services, Inc.

~~PROPOSED~~ ORDER

PURSUANT TO THE STIPULATION, IT IS SO ORDERED. Hearing on claim construction will be held on Thursday, June 27, 2013, at 2:00 p.m.

Dated: 4/19/2013



The Honorable Claudia Wilken
United States District Judge

Exhibit A

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION**

BRANDYWINE COMMUNICATIONS
TECHNOLOGIES, LLC,

Plaintiff,

v.

Case No: 6:12-cv-286-Orl-36DAB

CENTURYTEL BROADBAND
SERVICES, LLC and QWEST
CORPORATION,

Defendants.

ORDER

This cause comes before the Court upon the parties' Claim Construction Briefs. Plaintiff Brandywine Communications Technologies, LLC ("Plaintiff" or "Brandywine") filed its Opening Claim Construction Brief on November 19, 2012 (Doc. 48). Defendants Centurytel Broadband Services, LLC and Qwest Corporation (collectively "Defendants") filed their Opening Claim Construction Brief on November 19, 2012 (Doc. 46). Both Plaintiff and Defendants filed Memoranda in Opposition (Docs. 56, 58). On January 31, 2013, the Court held a claim construction hearing (the "Hearing"). *See* Doc. 89. After reviewing the parties' pleadings and hearing arguments of counsel, the Court construes the disputed claim terms as set forth herein.

BACKGROUND

This is an action for infringement of the following seven United States Patents (collectively, the "Patents-in-Suit"):

Patent No. 5,828,657 ("the '657 Patent"): Half Duplex Echo
Canceler Training Using a Pilot Signal.

Patent No. 7,894,472 (“the ‘472 Patent”): Method and Apparatus For Automatic Selection and Operation of a Subscriber Line Spectrum Class Technology.

Patent No. 6,970,501 (“the ‘501 Patent”): Method and Apparatus For Automatic Selection and Operation of a Subscriber Line Spectrum Class Technology.

Patent No. 5,444,704 (“the ‘704 Patent”): Dial Restoral Method and Apparatus.

Patent No. 5,206,854 (“the ‘854 Patent”): Detecting Loss of Echo Cancellation.¹

Patent No. 5,251,328 (“the ‘328 Patent”): Predistortion Technique for Communications Systems.

Patent No. 5,812,537 (“the ‘537 Patent”): Echo Canceling Method and Apparatus for Data Over Cellular.

Doc. 1, Exs. 1-2. In the Complaint, Plaintiff alleges that Defendants directly and indirectly infringe upon the patents-in-suit by selling products and services that perform infringing processes. Doc. 1, ¶¶ 9-71. In ruling upon these issues, the Court must define certain disputed claim terms contained in the Patents-in-Suit.

STANDARD

Claim construction is an issue of law reserved for the district court. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir. 1995) (*en banc*), *affirmed*, 517 U.S. 370 (1996). To ascertain the meaning of claims, the district court uses three primary sources constituting the intrinsic record: (1) the claims, (2) the specification, and (3) the prosecution history. *Id.* at 979.

¹ The parties do not disagree as to any claim terms in the ‘854 Patent. Doc. 48, p. 1 n.1; Doc. 49-Ex. 8-11.

Claim construction begins with the language of the claims. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“[w]e look to the words of the claims themselves . . . to define the scope of the patented invention.”). “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)); see also *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989) (“A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention.”). The words of a claim generally are given the ordinary and customary meaning they have to persons of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312-13; *Vitronics*, 90 F.3d at 1582. Moreover, claim terms are presumed to be used consistently throughout the patent, such that the usage of a term in one claim can often illuminate the meaning of the same term in other claims. *Phillips*, 415 F.3d at 1314-15; *Vitronics*, 90 F.3d at 1582.

While the language of the claims is the first source for interpretation, “[t]he claims, of course, do not stand alone.” *Phillips*, 415 F.3d at 1315. Rather, they are part of a fully integrated written instrument consisting of a specification, of which they are a part. *Id.* (citing *Markman*, 52 F.3d at 978). Accordingly, “claims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman*, 52 F.3d at 979).

The prosecution history is another component of the intrinsic evidence used to supply the proper context for claim construction. *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004). The prosecution history is comprised of the complete record of the

proceedings before the United States Patent and Trademark Office (“PTO”), including prior art cited during examination. *Phillips*, 415 F.3d at 1317; *Vitronics*, 90 F.3d at 1582-83; *Markman*, 52 F.3d at 980. It also includes communications between the examiner and the applicant that may reveal if the applicant limited the invention in the course of prosecution, with the effect of making the claim scope narrower than it would otherwise be. *Phillips*, 415 F.3d at 1317. The history can indicate the inventor’s understanding of the invention, and “whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In addition to intrinsic evidence, courts may also rely on extrinsic evidence, which “consists of all evidence external to the patent and prosecution history.” *Markman*, 52 F.3d at 980. However, extrinsic evidence is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)) (internal quotations omitted). Such evidence typically includes dictionaries, treatises, and testimony of the inventor or experts. *Markman*, 52 F.3d at 980. However, *Phillips* makes clear that extrinsic evidence is secondary to intrinsic sources and appropriate only when the available intrinsic evidence is not dispositive. *Phillips*, 415 F.3d at 1319.

ANALYSIS

I. The ‘501 and ‘472 Patents: *Method and Apparatus for Automatic Selection and Operation of a Subscriber Line Spectrum Class Technology*

1. “spectrum management classes defined by a standard” and “predefined spectrum management classes”

The term “spectrum management classes defined by a standard” appears in all asserted claims of the ‘501 Patent. Doc. 88, p. 2. The term “predefined spectrum management classes”

appears in all asserted claims of the ‘472 Patent. Plaintiff asserts the following potential constructions:

- **spectrum management classes defined by a standard:** deployment requirements for data transmitters designed to minimize spectral interference with other nearby data transmitters, which are defined by a standard
- **predefined spectrum management classes:** predefined deployment requirements for data transmitters designed to minimize spectral interference with other nearby data transmitters

Doc. 48, p. 15. The Parties agree that at the time of the invention, no spectrum management classes had been standardized or defined. *See* Doc. 56, pp. 19, 20; Doc. 48, p. 16. Defendants assert that this term is indefinite, or that it would be a “standard in existence on the filing date that defined Federal Communications Commission deployment rules for placing xDSL equipment into service on a subscriber line cable binder,” which did not exist. *Id.* Defendants maintain that if a claim does not incorporate a particular standard, it has no defined limit and thus provides no boundary for claim scope. Doc. 56, p. 19 (citing *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005); *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1371-72 (Fed. Cir. 2001)). In contrast, Plaintiff argues that these patents, while not incorporating a specific standard, describe a general category of standards and definitions that are used for spectrum management. Doc. 58, p. 12. Plaintiff maintains that any decisions made during the prosecution of a patent are distinguishable, because at that time, a patent does not enjoy the presumption of validity. *Id.* (citing *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376 (Fed. Cir. 2001)).

In response to Defendants’ argument that a standard that could change is indefinite, Plaintiff argued at the Hearing that the Federal Circuit has found claims can cover after-arising technology. *See* Doc. 92 (“Hearing Transcript”), pp. 58-59 (citing *Superguide Corp. v. DirectTV*

Enterprises, Inc., 358 F.3d 870 (Fed. Cir. 2004); *Innogenetics, N.V. v. Abbott Laboratories*, 512 F.3d 1363, 1371-72 (Fed. Cir. 2008)). In *Superguide*, the Federal Circuit reiterated that the law “does not require that an applicant describe in his specification every conceivable and possible future embodiment of his invention”, and found no reason to limit the scope of the claimed invention to analog technology. 358 F.3d at 880. In *Innogenetics*, the Federal Circuit reiterated that “case law allows for after arising technology to be captured within the literal scope of valid claims that are drafted broadly enough.” 512 F.3d at 1371-72.

Upon consideration, the Court will accept Plaintiff’s construction of these two terms. These terms are not insolubly ambiguous and are amenable to construction. *See Scientific, Inc. v. R. J. Reynolds Tobacco Co.*, 557 F.3d 1357, 1371 (Fed. Cir. 2008). Moreover, the Federal Circuit permits claims to include after-created embodiments of a standard. *Superguide*, 358 F.3d at 880; *Innogenetics*, 512 F.3d at 1371.

2. “a plurality of transceivers” and “a plurality of transceivers, each transceiver corresponding to one of the [compatible] modes”

With respect to the ‘501 Patent, the Parties dispute whether “a plurality of transceivers” can be one or more software programs within one piece of hardware, or whether it must be two pieces of hardware. At the Hearing, the parties argued at length about whether the claim, as written, can embody one single piece of hardware that can run multiple software types. *See* Hearing Transcript, pp. 75-114.² Specifically, Defendants explained that they should not need to put the word “hardware” in front of “transceiver”, a physical piece, but that they need this term construed so that “Brandywine is not allowed to argue to the Court on summary judgment or

² At the Hearing, Plaintiff revised its proposed alternative construction as follows: “one or more hardware transceivers that collectively operate in two or more modes available for connection, one at a time, to a subscriber line”. Hearing Transcript, p. 109.

perhaps to a jury that a single piece of hardware running two different software programs satisfies a claim requiring a plurality of transceivers.” *Id.* at 90.

Plaintiff’s attempts, both in its pleadings and at the Hearing, to overcome the plain language meaning of the term and argue that it can encompass two software types operating on a single hardware transceiver are unpersuasive. First, the term “transceiver” refers to a physical device. *See* Doc. 90-Ex. 1, p. 28 (citing Newton Harry, *Newton’s Telecom Dictionary* (11th ed., July 1996)).³ Second, the claim language as a whole negates the possibility that one piece of hardware would suffice, as it describes:

a plurality of transceivers, each transceiver corresponding to one of the modes, wherein the modem electrically couples a corresponding transceiver to the subscriber loop upon selecting one of the modes.

Whether or not software can be “electrically coupled” to anything, which Defendants vigorously deny, this language clearly envisions more than one physical transceiver. Finally, Brandywine’s analogy to a personal computer, arguing that the invention can be implemented in a single piece of hardware using different software parameters, much like a personal computer can operate both Internet Explorer and Firefox, is distinguishable. Doc. 48, pp. 17-18. As Defendants note, a personal computer capable of operating two different internet browsers is not a “plurality of personal computers.” Doc. 56, p. 23. The Court is unwilling to read additional possibilities into the claim language that negate the clear language and intent of the claim. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (“the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent.”). Accordingly, the Court accepts Defendants’ construction of these terms.

³ Indeed, while Plaintiff appears to argue in its Claim Construction Brief that the claim language does not limit transceivers to hardware only devices, Plaintiff appeared to concede at the Hearing that a transceiver is a physical device. *See* Doc. 48, p. 18; Hearing Transcript, p. 98. In any event, the Court finds Plaintiff’s suggested construction is not supported.

3. “the modem electrically couples”

The Court agrees with Defendants that this term is indefinite because it uses the term “the” but lacks an antecedent basis or other indication of the modem to which it is referring. Doc. 46, p. 27. Claim 12 of the ‘501 Patent first describes “a first modem located at a subscriber premise” and “a second modem located at a central office.” Doc. 1-Ex. 1, pp. 35-37. The claim then requires “a plurality of transceivers, each transceiver corresponding to one of the compatible modes, wherein the modem electronically couples a corresponding transceiver to the subscriber loop upon selecting one of the modes.” *Id.* at 37. Defendants argue that this term is insolubly ambiguous because one of ordinary skill in the art cannot determine whether “the modem” refers to either the first modem or the second modem. Doc. 46, pp. 32-33. Plaintiff maintains that the lack of antecedent basis does not necessarily mean indefiniteness. Doc. 91-Ex 6, p. 99 (citing *Energizer Holdings v. ITC*, 435 F.3d 1366, 1370 (Fed. Cir. 2006)).

Indeed, the Federal Circuit explained that claim definiteness is not analyzed in a vacuum, and “[w]hen the meaning of the claim would reasonably be understood by persons of ordinary skill when read in light of the specification, the claim is not subject to invalidity upon departure from the protocol of ‘antecedent basis.’” *Energizer*, 435 F.3d at 1370. While the requirement of an antecedent basis is a rule of patent drafting, the Court understands that the failure to provide an explicit antecedent basis does not always render a claim indefinite. *Id.*; *Slimfold Manufacturing Co. v. Kinthead Industries, Inc.*, 810 F.2d 1113, 1117 (Fed. Cir. 1987). However, the Federal Circuit has recognized that in cases where a claim does not have a proper antecedent and where the meaning is not otherwise ascertainable, the claim is indefinite. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) (“We have also stated that a claim could be indefinite if a term does not have proper antecedent basis where such basis is

not otherwise present by implication or the meaning is not reasonably ascertainable.”). Here, there is no indication that “the modem” means “either modem” as Brandywine argued at the Hearing. Doc. 91-Ex. 6, pp. 102-06. Indeed, the Court finds that the meaning of this term is not ascertainable by one of ordinary skill in the art and is thus indefinite. *See Halliburton*, 514 F.3d at 1249; *Energizer*, 435 F.3d at 1370.

4. Method steps in the ‘472 Patent

The Parties dispute three of the method steps of the ‘472 Patent. Specifically, they debate whether the method steps need to be automated. The method is described in claim 1 as follows:

A method comprising:

measuring subscriber loop characteristics; identifying a first allowable class and corresponding to the measured subscriber loop characteristics, where the allowable class is chosen from a group of predefined spectrum management classes **selecting an operating transceiver from a group of transceivers within a device**, where each transceiver is configured to communicate in a respective at least one of the predefined spectrum management classes, and where the selected operating transceiver is configured to communicate in the first allowable class; and **enabling the operating transceiver**.

Doc. 1-Ex. 1, p. 24. For each of these three bolded phrases, Defendants suggest a construction that impermissibly constrains the scope of the phrases. Therefore, the Court will accept Brandywine’s construction with respect to method steps i, ii, and iii.

With respect to “measuring subscriber loop characteristics”, the parties propose the following constructions, disagreeing about how “measuring” occurs:

Plaintiff: determining subscriber loop characteristics

Defendants: analyzing a test signal with an apparatus to determine subscriber loop characteristics

Doc. 46, p. 34; Doc. 48, p. 23. While Plaintiff construes “measuring” to mean “determining”, Defendants’ construction entails analyzing a test signal with an apparatus. For each of the process steps, Defendants require that an apparatus perform the step, while Plaintiff argues that

an individual could perform each of these steps. Doc. 46, pp. 29-30; *see* Doc. 91-ex. 7, pp. 111-113.

First, Defendants maintain that if an apparatus were not required, they are invalid pursuant to 35 U.S.C § 101. Defendants maintain that a claimed process is patentable under this section only if (1) it is tied to a machine or apparatus, or (2) it transforms a particular article into a different state or thing. Doc. 46, p. 34 (citing *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (“[T]he use of a specific machine or transformation of an article must impose meaningful limits on the claim’s scope to impart patent-eligibility.”)). Therefore, Defendants argue that Plaintiff’s construction, allowing a human to determine subscriber loop characteristics, would invalidate the patent. *Id.* at 35. In response, Plaintiff argued at length that its construction does pass the “machine or transformation test” required by *Bilski*. Doc. 91-Ex. 7, p. 116. Second, Defendants argued at the Hearing that the specification of the ‘472 Patent describes the invention as automating these steps. *See* Doc. 90-Ex. 1, pp. 53-54.⁴ However, as Brandywine argues, the other patent claims use the word “automated” when it was apparently intended. Doc. 91-Ex. 7, p. 110; *see* ‘472 Patent, Claims 13 and 22.

Third, Plaintiff cites a recent Federal Circuit decision, emphasizing that when a patent describes the features of a ‘present invention’ as a whole, this description limits the scope of the invention. *Accentra, Inc. v. Staples, Inc.*, 2013 WL 49556 (Fed. Cir. 2013). Specifically, in *Accentra*, the Federal Circuit reversed the district court’s construction to include both automatic and manual mechanisms for releasing a track pull when a stapler is opened, and concluded that the claim was limited to track pulls that open automatically when the stapler handle and body are

⁴ “The present invention provides a communication device, such as a modem, that is capable of detecting whether it is capable of operating in a mode that is compatible with one or more of the spectrum management classes and which automatically selects a mode of operation that is compliant with one of the spectrum management classes...” Doc. 1-Ex. 1, p. 24.

rotated away from the stapler base.” *Id.* at *4. However, the Court notes that the claim being construed in *Accentra* appeared to require a construction indicating whether or not it covered human action or automatic action, whereas here the step process terms “measure”, “select”, and “enable” do not necessitate such elaboration.⁵

Upon consideration of the arguments presented, the Court finds that Defendants’ proposed construction would require the Court to inappropriately limit the words of the method steps more than necessary. *See Int’l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1373-74 (Fed. Cir. 2004) (a claim term should be given “its broadest ordinary meaning consistent with the written description.”). The Court will not read into the process steps the requirement of automation. Accordingly, the Court accepts Brandywine’s construction of the method steps in the ‘472 Patent.

II. The ‘328 Patent: *Predistortion Technique for Communication Systems*

The ‘328 Patent discloses a technique of predistorting a signal to compensate for the distortion of the signals transmitted between transceivers in a way that does not enhance noise. Doc. 48, p. 7; Doc. 46, p. 16.

1. “predistorting a transmitted signal from said transceiver”

With respect to this term, the parties disagree as to whether the predistortion must be “based upon the inverse” of amplitude distortion or just generally compensate for such distortion. *See* Doc. 48, p. 8; Doc. 46, p. 20. The parties propose the following constructions:

Plaintiff: adjusting a signal to be transmitted from the transceiver to compensate for amplitude distortion before introduction of the amplitude distortion

⁵ The claim language concerned a stapler handle being “movable to extend rearward from the body in the open position of the stapler so that the track pull extends beyond the base sidewalls to be exposed outside the base sidewalls.” *Accentra*, 2013 WL 49556, *3.

Defendants: adjusting a signal to be transmitted from the transceiver based upon the inverse of the amplitude distortion before introduction of the amplitude distortion

Plaintiff maintains that the patent does not require any particular formula for the predistortion. Doc. 48, p. 8. First, it explains that the word “inverse” appears only twice in the specification, in a single paragraph where it is evident that it concerns an exemplary embodiment. *Id.*; see Doc. 1-Ex. 2 at 5:1-18 (“In certain system applications, it is desirable to predistort the transmitted signal from transceiver 102 based on the exact inverse of the determined distortion characteristic 120. Such processing works well when the noise injected by four-wire transmission path 106 is primarily quantization noise.”). Accordingly, Plaintiff insists that Defendants’ proposed construction limits the claim to an example in the specification, which is prohibited by the Federal Circuit. *Id.*; see *Phillips*, 415 F.3d at 1320.

Defendants argue that the ordinary meaning of “predistorting” in the context of the claim is adjusting a signal based on the inverse of expected distortion. Doc. 46, p. 21. Defendants also note that the word “inverse” is used in the description of the invention. *Id.*; see Doc. 1-Ex. 2, at 5:1-16. Thus, Defendants argue that because the specification discloses no other way of predistorting other than adjusting based upon the inverse of the expected distortion, Plaintiff’s proposed construction unduly broadens the claim. *Id.*

In *Phillips*, the Federal Circuit reiterated that the specification is the best guide to the meaning of a disputed term. *Id.* at 1321. However, the Court warned against reading a limitation from the description into the claims, which is inappropriate. *Id.* at 1320. Here, Defendants’ citation to the word “inverse” in the ‘328 Patent is from an exemplary embodiment and even prefaces the explanation with the caveat “In certain situations.” Doc. 1-Ex. 2, at 5:1-4. Second, as Plaintiff emphasized at the Hearing, the ‘328 Patent describes the invention several

times as compensating for distortion. *See, e.g.* Doc. 1-Ex. 2 at 2:8-15.⁶ Therefore, the Court is not willing to limit the term “predistorting” as requiring compensation through the inverse of the expected distortion. *See Phillips*, 415 F.3d at 1320-21. Thus, the Court accepts Plaintiff’s construction of this term.

2. “communications channel including a plurality of serially connected channel sections which introduce amplitude distortion into a transmitted signal”

With respect to this term, the Parties dispute whether more than one communication section must introduce amplitude distortion. Doc. 46, p. 18; Doc. 48, p. 9. They propose the following constructions:

Plaintiff: communications channel including a plurality of serially connected channel sections at least one of which introduces amplitude distortion into a transmitted signal

Defendants: communications channel including a plurality of serially connected channel sections each of which introduces amplitude distortion into a transmitted signal

The Court agrees with Defendants that the adjectival phrase “which introduces” is modifying the word “sections”, a plural noun. Indeed, if the term read “which introduces,” this would leave room for the interpretation that Plaintiff seeks, wherein one or more communication sections can introduce the distortion. Contrary to Plaintiff’s reading, the grammatical structure of this term would not require the claim to say “each” or “every” to indicate it is referring to more than one channel section. Doc. 48, p. 9. Also, Plaintiff’s citation to *Voda v. Cordis Corp.*, 536 F.3d 1311 (Fed. Cir. 2008) is unpersuasive. In *Voda*, the Federal Circuit noted that where two claims of a patent required the contact portion of a catheter be “substantially straight,” it was telling that a

⁶ “Broadly speaking, the present invention covers the notion of determining the distortion introduced within a portion of a communications channel between two signal transceivers by processing the received signal at a transceiver and then using the results of this processing to predistort the signal transmitted by that transceiver to compensate for all or part of the determined amplitude distortion.” ‘328 Patent, Doc. 1-Ex. 2, at 2:8-15.

third claim did not indicate a similar requirement. 536 F.3d at 1320. By contrast here, even if other claims of the patent have the describing words “each” or “every”, this sentence as written does not require those terms for the plain meaning to describe more than one channel section.

Therefore, because the grammatical construction of the sentence forecloses the possibility that just one channel section can introduce amplitude distortion, the Court adopts Defendants’ construction of this term.

3. “determining” steps

With respect to each of the three terms listed below, the parties dispute whether the receiving transceiver must analyze the signal to determine the amplitude distortion introduced during transmission and whether the signal must travel through all of the sections of the communication channel. Doc. 48, p. 11; Doc. 46, pp. 22-24. Plaintiff argues that the claims do not contain a requirement that the signal must travel through all sections of the communications channel, and insist that Defendants’ attempt to limit how the line transmitting the signal arrives at the transceiver should be rejected. *Id.* at 11-12. The parties propose the following constructions:

“determining less than all of the amplitude distortion introduced within said communications channel in response to a signal received from said communications channel”

Plaintiff: determining the amplitude distortion introduced by some, but not all, serially connected sections of said communications channel in response to a signal received from said communications channel, with “sections” construed according to the parties’ agreed construction

Defendants: analyzing a signal received to determine the amplitude distortion introduced to it by some, but not all, serially connected sections of the communications channel after transmission through all of the sections

“determining the amplitude distortion introduced only in the communications channel section adjacent said receiver in response to said received training sequence”

Plaintiff: “ordinary meaning” with “sections” construed as stipulated

Defendants: analyzing the received training sequence to determine the amplitude distortion introduced to it only in the communications channel

“determining the amplitude distortion introduced within only one of the said communications channel sections in response to a signal received from said communications channel”

Plaintiff: “ordinary meaning” with “sections” construed as stipulated

Defendants: analyzing a signal received to determine the amplitude distortion introduced to it within only one of the communications channel sections after transmission through all the sections.

First, Plaintiff maintains, contrary to Defendants’ position, that the claim does not require the channel’s distortion be determined using a signal that has been transmitted through all of the sections. Doc. 48, p. 11. Plaintiff points to three instances in the claim language which require only that a signal is “received” and not that the signal goes through the entire communications channel. *Id.*; see ‘328 Patent, Doc. 1-Ex. 2, at 8:47-48. Defendants argue that the preambles of the claim imply that the purpose of the invention relates to signals being transmitted through all sections of the channel. Doc. 46, p. 25; see ‘328 Patent, at 6:5-15 (“a communications channel through which a signal is transmitted introduces amplitude distortion”). Upon review, the Court is not sufficiently persuaded by Defendants’ argument that the invention implies a signal must be transmitted through every section in order to read in that restriction into the claim.

Second, with respect to whether the transceiver must analyze the signal to determine the amplitude distortion introduced, Defendants argued at the Hearing that the intrinsic record supports construing the word “determining” to require that the apparatus analyze a signal and not just receive the results of analysis performed by another transceiver. See Doc. 90-Ex. 2, p. 110. Specifically, Defendants maintain that the language of the claim, “a method for use in a transceiver” implies that the same transceiver performs both the determining step and the predistorting step. Doc. 46, p. 22. Consequently, Defendants argue that because the ‘328 Patent emphasizes that a single device does both the determining and predistorting, the evidence shows

that the determining involves analysis of the signal. *Id.* at 23. Finally, Defendants maintain that the ‘328 Patent distinguishes the prior art, known as the “Tomlinson technique,” and that the summary of the invention implies that the “determining” means “analyzing.” *Id.*; *see* ‘328 Patent, Doc. 1-Ex. 2, at 2:8-15.⁷

In its response to Defendants’ proposed construction, Plaintiff argues that “determining” should be accorded its plain meaning, and that Defendants’ attempt to replace it with “analyzing a signal” is inappropriate. Doc. 58, p. 9. Specifically, Plaintiff insists that the claim language, contrary to Defendants’ argument, does not require the “determining” and “predistortion” steps be carried out by the same transceiver. *Id.* Also, Plaintiff maintains that “determining” has a broader meaning than “analyzing” and that this distinction is evidenced by claim 19 of the ‘328 Patent. *Id.*; *see* Doc. 1-Ex. 2, at 8:8-26 (adding the requirement that it include a “means for analyzing [an] error signal to carry out the amplitude distortion determination.”). Third, Plaintiff disagrees with Defendants’ presumption that because the preamble uses the phrase “in a transceiver,” this requires the signal to be analyzed as part of the “determining” step. *Id.* at 9.

First, the Court agrees with Plaintiff that “determining” has a broader meaning than “analyzing,” and includes the possibility of deciphering a signal that contains the results of a previous analysis. The language of the preamble does not necessarily imply the limitation that Defendants seek. Second, the Court agrees with Plaintiff that the existence in the prior art, Tomlinson technique, does not preclude its interpretation that analysis of the signal can be done in a transceiver separate from the predistorting receiver. *Id.* at 10; *see Mee Industries v. Dow*

⁷ “Broadly speaking, the present invention covers the notion of determining the distortion introduced within a portion of a communications channel between two signal transceivers by processing the received signal at a transceiver and then using the results of this processing to predistort the signal transmitted by that transceiver to compensate for all or a part of the determined amplitude distortion.” Doc. 1-Ex. 2, at 2:8-15.

Chem. Co., 608 F.3d 1202, 1208 n.2 (11th Cir. 2010) (inventions are deemed patentable by the claim as a whole).

With respect to the “determining” steps, the Court is not willing to read into the term the limitations that Defendants seek. Accordingly, the Court adopts Plaintiff’s construction of these terms.

III. The ‘537 Patent: *Echo Canceling Method and Apparatus for Data Over Cellular*; and the ‘657 Patent: *Half-Duplex Echo Canceler Training Using a Pilot Signal*.

The ‘537 and ‘657 Patents relate to a process called “echo cancellation,” which removes echoes that occur when a signal is transmitted from one point to another point. Doc. 46, p. 7; Doc. 48, p. 12.

1. “fixed amount”

With respect to this term, Defendants propose to construe it as a “predefined, non-variable amount,” and Plaintiff proposes giving the term its ordinary meaning. Doc. 48, p. 12; Doc. 46, p. 12. Defendants argue that this proposed construction accurately captures the concept of being “fixed” as used in everyday language. Doc. 46, p. 12. Further, Defendants maintain that the specification describes the invention as adjusting the tap coefficients by a predefined amount. *Id.*; see ‘537 Patent, Doc. 1-Ex. 1, at 4:12-32 (“In particular, circuitry in a cellular modem detects the presence of a residual echo signal, and, in response thereto, adjusts the taps of the corresponding echo canceler by a predefined amount.”).

However, as Brandywine argues, claim construction is appropriate to clarify a claim when necessary, but that the construction of certain terms, especially lay terms, are best left for a jury. Doc. 48, p. 13 (citing *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (“[A] sound claim construction need not always purge every shred of ambiguity. The resolution

of some line-drawing problems—especially easy ones like this one—is properly left to the trier of fact.”)). Indeed, where parties dispute the meaning of a law term, courts can rely upon its ordinary meaning and reject an overly narrow construction. *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010).

Here, the term “fixed amount” does not have a technical meaning that would cause jury confusion. Accordingly, the Court will accord this term its ordinary meaning.

2. “adjusting” claim phrases

For the “adjusting” phrases in Patent ‘537, the parties propose the following constructions:

a. “adjusting each initial value of each tap coefficient by a fixed amount”

Plaintiff: ordinary meaning

Defendants: each initial value of each tap coefficient is adjusted by a fixed amount, the adjustment being distinct from continued adaptation of the echo canceler

b. “adjusting the initial value of each one of the set of tap coefficients of the echo canceler by a fixed amount”

Plaintiff: ordinary meaning

Defendants: the initial value of each one of the set of tap coefficients of the echo canceler is adjusted by a fixed amount, the adjustment being distinct from continued adaptation of the echo canceler

Essentially, the parties disagree over Defendants’ addition of the phrase “the adjustment being distinct from continued adaptation of the echo canceler.” Doc. 48, p. 14; Doc. 46, pp. 13-14. Defendants argue that while Plaintiff’s infringement contentions rest on the allegation that Defendants’ accused products engage in “continual adaptation” of tap coefficients during full duplex transmission, such “continual adaptation” is disparaged by the ‘537 Patent’s specification. Doc. 46 at 13; *see* ‘537 Patent, Doc. 1-Ex. 2, at 3:16-20 (“Full-duplex training of the echo canceler, while theoretically possible, is not practical from a price/performance

viewpoint in the design of data communications equipment.”). Defendants explain that the specification describes using an amount to shift the coefficients immediately, and does not envision any continual adaptation. *Id.*

In response, Plaintiff first insists that Defendants’ proposed construction—describing what is excluded from the scope as opposed to what is included within it—is disfavored. Doc. 48, p. 9 (citing *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1322 (Fed. Cir. 2008) (declining a negative limitation where neither the district court nor defendant had identified “any express disclaimer or independent lexicography in the written description that would justify adding that negative limitation.”). Second, Plaintiff argues that while nothing in the ‘537 Patent disavows continued adaptation of the tap coefficient, the last paragraph of the specification states that “the inventive concept is also applicable to an echo canceler that adapts in the data phase[.]” ‘537 Patent, Doc. 1-Ex. 2 at 7:32-36. Thus, Plaintiff argues that the inventors contemplated an adaptive echo cancellation process, and contrary to Defendants’ proposed negative limitation, these adjustments are not necessarily “distinct from continued adaptation of the echo canceler.” Doc. 48, p. 15.

The Court agrees with Plaintiff that it would be inappropriate to add a negative limitation and narrowly construe a claim’s ordinary meaning. *See Finjan*, 626 F.3d at 1207; *see also Johnson & Johnson Vision Care, Inc. v. CIBA Vision Corp.*, 634 F. Supp. 2d 1293, 1323 (M.D. Fla. 2008) (disagreement between the parties concerning the meaning of the claims does not automatically render the claims so lacking in clarity as to be invalid for indefiniteness). Accordingly, the Court will accord these two phrases their ordinary meaning.

3. “pilot signal”

Plaintiff: a signal wave transmitted over the system to indicate control or its characteristics.

Defendants: signal causing linear operation of the communications channel

The Parties explain that in the ‘657 Patent, while the near end modem sends out its training signal, the far-end modem transmits a “pilot signal” that assists in the training. *See* ‘657 Patent, Doc. 1-Ex. 1, Abstract. With respect to this term, the parties disagree as to whether the signal is simply transmitted over the system to indicate control or system characteristics, or if it must cause linear operation of the communications channel. Doc. 48, p. 16.

Defendants argue that Plaintiff’s infringement theory is unrelated to the pilot signal at issue in the invention, which causes a communications channel to shift into linear operation during half-duplex training. Doc. 46, p. 14. Defendants maintain this “causation” process is the only one disclosed in the ‘657 Patent. *Id.*; *see* 657 Patent, Doc. 1-Ex. 1, at 1:66-2:12, 4:36-40 (“Therefore, and in accordance with the invention, we have developed a method and apparatus for reducing the residual echo signal, which is effectively caused by the above-mentioned switching between a linear mode of operation and a nonlinear mode of operation of a network compander.”). Also, Defendants point to the prosecution history, which characterizes the invention as a pilot signal that causes the linear operation. *See* Doc. 46-Ex. D, at 5 (“This pilot tone is of sufficient signal level to cause equipment in the cell site transceiver, such as a compander, to operate in a linear mode.”). In sum, Defendants contend that Plaintiff’s construction would exclude preferred embodiments of the patent by requiring a signal wave be transmitted over the system for the purpose of indicating control of characteristics. Doc. 46, pp. 15-16. Indeed, as Defendants note, a construction that excludes the preferred embodiment of a patent is rarely correct. *See Vitronics*, 90 F.3d at 1583.

At the Hearing, Brandywine maintained that its construction was not inconsistent with the preferred embodiment in the specification. *See* Doc. 92, p. 250. To the contrary,

Brandywine argues that the term “pilot tone” has a clear meaning, citing the New IEEE Standard Dictionary of Electrical and Electronics Terms (1992). *See* Doc. 49-Ex. 12, pp. 3-4.⁸ Brandywine maintains that it simply adopts this well understood meaning.⁹ Moreover, Brandywine explained that “pilot signal” is a term that a jury would not typically understand, and explained that their construction applied the ordinary meaning of the term. *See* Doc. 92, p. 244. Brandywine argues that Defendants were attempting to read additional limitations to the term from the specification. *Id.*

Defendants conceded at the Hearing that although they mostly agreed with the “generic meaning of the term”, albeit noting that it was slightly narrow. *Id.* at 250. However, they argued that the actual issue “is does this pilot signal have to have something to do in any way, shape, or form with the compander and the issue of echo cancellation.” *Id.*¹⁰ Although Defendants’ argument that Plaintiff is incorrectly using the pilot signal in its infringement theory could be meritorious, this argument cannot justify the Court’s construction of this technical term with anything other than its ordinary meaning. Plaintiff’s pleadings cite to a technical definition of the term “pilot.” *See* Doc. 49-Ex. 12, pp. 3-4. Since the Plaintiff’s proposed construction for the term “pilot signal” more closely resembles this definition, and in the absence of a stipulated definition from the parties, the Court will adopt Plaintiff’s construction.

⁸ The New IEEE Standard Dictionary defined “pilot (transmission system)” as “A signal wave, usually a single frequency, transmitted over the system to indicate or control its characteristics.”

⁹ At the Hearing, Brandywine emphasized that its construction was “taken straight from a technical dictionary from the time” and “is perfectly applicable to the preferred embodiment of the compander and so forth described in the specification.” Doc. 92, p. 250.

¹⁰ Indeed, Defendants suggested at the Hearing that since pilot signals have been around since the 1950s, the parties could agree to what the term meant. *See* Doc. 92, p. 250 (“I’d propose that the two of us talk about that, maybe submit in terms of the generic meaning of what a pilot --- pilot signals have been around since the 1950s. There are 1950s patents that use the term pilot signal. We can figure out what that means.”)

IV. Conclusion

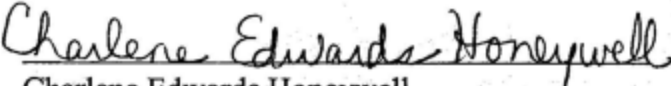
The parties recently filed an Agreed Motion to extend time to Exchange Infringement and Invalidity Contentions, noting that the contents of their infringement and invalidity contentions could be impacted by the Court's claim construction order. Doc. 94. The Court agrees that an extension of thirty days following the entry of this Order is warranted.

Accordingly, it is hereby **ORDERED**:

1. The parties' Agreed Motion to extend time to Exchange Infringement and Invalidity Contentions (Doc. 94) is **GRANTED**. The parties shall have **thirty (30) days** from the date of this Order to amend their infringement and invalidity contentions.
2. As described above in detail, the disputed claim terms are construed as follows:
 - **spectrum management classes defined by a standard**: deployment requirements for data transmitters designed to minimize spectral interference with other nearby data transmitters, which are defined by a standard
 - **predefined spectrum management classes**: predefined deployment requirements for data transmitters designed to minimize spectral interference with other nearby data transmitters
 - **a plurality of transceivers**: two or more hardware transceivers available for connection, one at a time, to the subscriber line
 - **the modem electrically couples**: indefinite
 - **measuring subscriber loop characteristics**: determining subscriber loop characteristics
 - **selecting an operating transceiver from a group of transceivers within a device**: selecting an operating hardware and/or software transceiver from a group of such transceivers within a device
 - **enabling the operating transceiver**: enabling the operating hardware and/or software transceiver

- **predistorting a transmitted signal from said receiver:** adjusting a signal to be transmitted from the transceiver to compensate for amplitude distortion before introduction of the amplitude distortion
- **communications channel including a plurality of serially connected channel sections which introduce amplitude distortion into a transmitted signal:** communications channel including a plurality of serially connected channel sections each of which introduces amplitude distortion into a transmitted signal
- **determining less than all of the amplitude distortion introduced within said communications channel in response to a signal received from said communications channel:** determining the amplitude distortion introduced by some, but not all, serially connected sections of said communications channel in response to a signal received from said communications channel, with “sections” construed according to the parties’ agreed construction
- **determining the amplitude distortion introduced only in the communications channel section adjacent said receiver in response to said received training sequence:** ordinary meaning, with “sections” construed as stipulated
- **determining the amplitude distortion introduced within only one of the said communications channel sections in response to a signal received from said communications channel:** ordinary meaning with “sections” construed as stipulated
- **fixed amount:** ordinary meaning
- **adjusting each initial value of each tap coefficient by a fixed amount:** ordinary meaning
- **adjusting the initial value of each one of the set of tap coefficients of the echo canceler by a fixed amount:** ordinary meaning
- **pilot signal:** a signal wave transmitted over the system to indicate control or its characteristics

DONE and **ORDERED** in Orlando, Florida on April 17, 2013.


Charlene Edwards Honeywell
United States District Judge

Copies furnished to:
Counsel of Record
Unrepresented Parties